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## REMARKS

The Office Action dated December 28, 2005 has been reviewed, and the comments of the U.S. Patent Office have been considered. Claims 2-26, 36-47, 52-54 and 58-134 are withdrawn from consideration. Newly added claims 135-152 are presented for consideration. Claims 135-152 are readable on the elected Invention Group I and species Group C. Accordingly, claims 1-152 are now pending. Applicants thank the Examiner for the allowance of claim 55.

Claims 1, 4, 27, 29 and 48-51 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by, or in the alternative obvious under 35 U.S.C. § 103(a), over U.S. Patent No. 2,155,990 to Hodgman, Jr. ("Hodgman"). In addition, claims 1, 27-35 and 48-51 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by, or in the alternative obvious under 35 U.S.C. § 102(e), over U.S. Patent Publication No. 20050050531 to Dolan ("Dolan"). Applicants respectfully submit that neither Hodgman nor Dolan expressly or inherently show or describe a dry sprinkler that includes, *inter alia*, an arrangement of components that provide a flow of fluid from the outlet of the structure that is "at least 95 percent of the rated K-factor multiplied by the square root of the pressure of the flow of fluid fed into the inlet of the structure in pounds per square inch gauge," as recited in each of independent claims 1 and 51. Accordingly, neither Hodgman nor Dolan show or describe, or alternatively teach or suggest, each and every feature of applicants' claimed dry sprinklers, thus the rejections are traversed.

According to the Examiner, Hodgman and Dolan each inherently show and describe a dry sprinkler device having a K-factor rating defining an expected flow-rate in the absence of express discussions of K-factor rating. Contrary to the Examiner's assertions, applicants contend that the Examiner has not provided the requisite basis in fact or technical reasoning to reasonably support a determination, necessarily stemming from the teachings of Hodgman or Dolan, that the cited references inherently show or describe a dry sprinkler device in which the flow of fluid from the outlet of the structure is at least 95 percent of the rated K-factor multiplied by the square root of the pressure of the flow of fluid fed into the inlet of the structure in pounds per square inch gauge. *See* MPEP § 2112. Instead, the Examiner has relied upon generalized depictions, descriptions and silence regarding fluid flow and sprinkler

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operations to conclude that Hodgman and Dolan each inherently have a K-factor rating defining an expected flow-rate. The Examiner does not point to any teaching in either of the cited references that would support an inherent showing "that the flow of fluid from the outlet of the structure is at least 95 percent of the rated K-factor multiplied by the square root of the pressure of the flow of fluid fed into the inlet of the structure in pounds per square inch gauge."

The Examiner relies on Figure 3 and page 2, lines 20-39 of Hodgman showing and describing water flowing "unobstructed" through the inlet port and out the outlet to the deflecting structure to conclude that the sprinkler device of Hodgman would inherently have a K-factor rating defining an expected flow rate. However, nothing cited by the Examiner supports a determination, inherent or otherwise, that the flow of fluid from the outlet of the structure in Hodgman is at least 95 percent of the rated K-factor multiplied by the square root of the pressure of the flow of fluid fed into the inlet of the structure in pounds per square inch gauge. The Examiner's only support for this conclusion is applicant's own disclosure.

Again, with regard to Dolan, the Examiner relies on the silence in Dolan to draw the conclusion of inherent disclosure. The Examiner concludes that "there is nothing in the disclosure of Dolan that would indicate that the water flow rate through the device would be at an unacceptable level." After formulating this conclusion, the Examiner utilizes the teachings of applicant's own disclosure, in the face of Dolan's silence to hypothesize that the device of Dolan would inherently have a K-factor rating defining an expected flow rate, and because "one would reasonably expect the device of Dolan to provide an acceptable flow rate, one can reasonably conclude that the flow of fluid from the outlet of Dolan is at least 95 percent of the inherent K-factor rating." However, nothing cited by the Examiner supports a determination, inherent or otherwise, that the flow of fluid from the outlet of the structure in Dolan is at least 95 percent of the rated K-factor multiplied by the square root of the pressure of the flow of fluid fed into the inlet of the structure in pounds per square inch gauge.

However in contrast to the Examiner's approach, in order to establish inherency, "the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." MPEP § 2112 (citations omitted).

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As discussed above Hodgman and Dolan do not necessarily present the missing descriptive matter regarding the fluid flow. The Examiner has not provided a factual or technical reasoning that the missing descriptive material is necessarily present. Moreover, as discussed in the application as originally filed at page 5, paragraph number [0010], applicants have discovered that known dry sprinklers fail to provide a flow rate at an expected level of tolerance based on the discharge coefficient for which the known sprinklers purport to provide at various pressures provided to the inlet prior to actuation of the dry sprinkler. Specifically, the known dry sprinklers provide an actual flow rate from the outlet at less than an acceptable tolerance level. Thus, one of ordinary skill, based on applicants' discovery would not conclude that the missing descriptive fluid flow is necessarily present in either Hodgman or Dolan. Thus, Hodgman and Dolan fail to show each and every feature of the claimed inventions, and therefore claims 1 and 51 are patentable over the cited art.

Furthermore with regard to claim 51, claim 51 recites "means for repositioning the central axis of the face . . . so that a flow of fluid . . . is at least 95 percent of the rated K-factor multiplied by the square root of the pressure," thereby invoking 35 U.S.C. § 112, sixth paragraph. Application of a prior art reference in the examination of a means-plus-function claim limitation requires that the applied prior art element perform the identical function specified in the claim. MPEP § 2183. If the prior art reference teaches identity of function, (which the Examiner purports Hodgman and Dolan to do with regard to claimed function of claim 51) then the Examiner has the initial burden of proof for showing that the prior art structure or step is the same as or equivalent to the structure, material, or acts described in the specification which has been identified as corresponding to the claimed means or step plus function. *Id.* The Examiner has not satisfied the requisite burden of proof for showing Hodgman or Dolan to have structure that is the same or equivalent to the structure, material, or acts described in applicants' specification which has been identified as corresponding to the claimed means plus function of claim 51. For example, the Examiner has not established a *prima facie* case of equivalence between the structure shown and described in applicants' specification in the elected species of Group C and the structure of Hodgman or Dolan. Thus, claim 51 is patentable over the prior art for at least this reason.

The Examiner, in the alternative, asserts that claims 1 and 51 are rendered obvious under Section 103(a) and 102(e) respectively in view of Hodgman or Dolan.

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Specifically, the Examiner alleges that it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust or modify the disclosed parameters of the device of either Hodgman or Dolan in order to ensure that the flow of fluid from the outlet is provided at an acceptable and optimum level. However, the Examiner does not point to any teaching, suggestion or motivation to modify either device of Hodgman or Dolan to reach the claimed flow of fluid.

Moreover, prior to applicants' discovery with regard to the unacceptable fluid flow of known dry sprinklers, one of ordinary skill would have no motivation or suggestion to modify Hodgman or Dolan. The only motivation to modify the cited references is applicants' own disclosure. Because there is no teaching or suggestion in either Hodgman or Dolan to modify their respective sprinklers to reach the claimed flow of fluid, Hodgman and Dolan fail to teach the claimed inventions as a whole. Accordingly, claims 1 and 51 are patentable over the cited references. Claims 4, 27, 29 and 48-50 depend directly or indirectly from claim 1 and should be allowed for at least the same reasons. Withdrawal of the rejections is respectfully requested.

Claims 4, 6, 28, 32-35, 56 and 57 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4 and 6 are withdrawn from further consideration as being readable upon a different species than the elected embodiment of FIGS. 3A-3F. Claim 28 has been amended to correct the lack of antecedent basis. Claim 28 is readable upon the elected species, for example, the claimed "planar annulus surface" reads upon the surface indicated by reference numeral 38b as seen in FIG. 3C. Claims 31 and 32 have been amended to clarify the claimed features therein and thereby overcoming the rejection. Support for the amendments is provided in the application as originally filed, for example, at page 17, paragraph numbers [0065] – [0066], FIG. 3C. With regard to claim 33, the "generally planar surface" of the disc annulus is supported by the application as originally filed, for example, at page 21, paragraph number [0081], FIGS. 3A, 3C. No further explanation is believed necessary and withdrawal of the rejection is respectfully requested. With regard to claim 34, applicants refer the Examiner to the detailed description at page 21, paragraph number [0081], FIGS. 3A, 3C. No further explanation is believed necessary and withdrawal of the rejection is respectfully requested. With regard to claim 35, the claim is supported by the application as originally filed

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at, for example, page 31, paragraph [00112]. Claim 56 has been amended to correct the lack of antecedent basis and thereby overcome the rejection of both claim 56 and claim 57 depending therefrom. Support for claim 56 is provided in the application as originally filed, for example, at page 30, paragraph number [00110]. Thus, the rejection under 35 U.S.C. § 112 has been overcome and should be withdrawn.

The Examiner has objected to the specification as allegedly failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner asserts that the specification does not appear to disclose the specific angle stated in claim 28, which recites, "the truncated conical surface extending at an angle of about thirty degrees with respect to the longitudinal axis." Claim 28 is supported by the application as originally filed, for example, at FIGS. 3A and 3C shown is an inlet 21 having a truncated conical surface 38c extending at an angle of about thirty degrees with respect to the longitudinal axis. Accordingly, the specification provides sufficient proper antecedent basis for the claimed subject matter of claim 28. Withdrawal of the objection is respectfully requested.

Presented for the Examiner's review and consideration are newly added claims 135-151. Support for these newly added claims is provided in the application as originally filed, for example, at page 30, paragraph number [00110] to page 31, paragraph number [00114].



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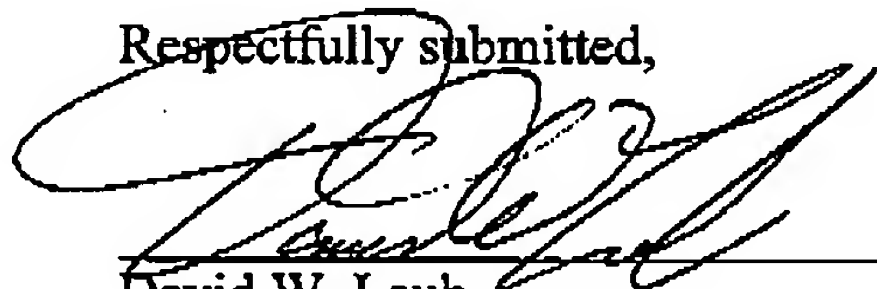
**CONCLUSION**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this Application and the prompt allowance of at least claims 1, 4, 6, 27-35, 48-51, 55-57 and 135-151. Upon allowance of claim 1, which is generic, all claims depending directly or indirectly therefrom should also be allowed; in particular, claims 2-50.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned to expedite prosecution of the application.

The Commissioner is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-3081. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



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